

Claim Amendments

1 (currently amended): A ferrule for a fiber optic cable, the ferrule comprising:

an outer wall and an inner wall, the inner wall defining a hollow interior conduit in the ferrule, the inner wall being shaped and sized to snugly receive a jacketed an outer jacket layer of a fiber optic cable end;

~~at least one cavity~~ multiple cavities recessed within the inner wall in communication with the conduit; and

a passage extending from ~~the at least one~~ each cavity to the outer wall, the cavities having larger cross-sectional areas than the passages.

2 (original): The ferrule of claim 1 wherein there are a plurality of cavities annularly spaced around the inner wall.

3 (original): The ferrule of claim 2 wherein there are sets of cavities spaced along a length of the inner wall.

4 (original): The ferrule of claim 2 wherein the annularly spaced cavities form a four leaf clover configuration.

5 (original): The ferrule of claim 4 wherein clovers of the four leaf clover configuration are connected by rounded edges.

6 (original): The ferrule of claim 2 wherein the cavities include semi-oval shaped elements.

7 (original): The ferrule of claim 6 wherein the annularly spaced semi-oval shaped elements are connected by inclined surfaces joined to short edges extending from the semi-oval shaped elements and parallel to the passages.

8 (original): The ferrule of claim 1 wherein the ferrule has a cable insertion end and an opposite, light-output end.

9 (currently amended): The ferrule of claim 8 further comprising a narrow inner channel adjacent the light-output end sized to receive and align a fiber core of the fiber optic cable extending from the outer jacket layer.

10 (currently amended): The ferrule of claim 9 further comprising an inner conical wall within the ferrule converging from the inner wall to the narrow inner channel.

11 (currently amended): A ferrule for a fiber optic cable comprising:

a section having an exterior and an interior conduit defined by an inner annular wall, the inner annular wall being sized to receive an outer jacket layer of the fiber optic cable; and

a plurality of cavities recessed within the inner annular wall and open to the conduit and the exterior of the section;

an additional section with a narrow channel sized to receive a fiber core of the cable extending from the outer jacket layer; and

a conical wall connected to the inner annular wall and converging to the narrow channel for guiding the core into the channel.

12 (canceled).

13 (canceled).

14 (original): The ferrule of claim 11 wherein the cavities are spaced around the inner annular wall.

15 (original): The ferrule of claim 11 wherein the cavities are spaced along the length of the inner annular wall.

16 (original): The ferrule of claim 11 wherein separate passages join each cavity to the exterior of the ferrule, the passages being smaller in cross-sectional area than the cavities.

17 (original): The ferrule of claim 16 wherein the passages extend between recesses in the exterior of the ferrule to the cavities.

18 (currently amended): A method for securing a ferrule to an end of a fiber optic cable comprising the steps of:

forming the ferrule with at least one cavity facing a hollow interior of the ferrule and a passage extending from the at least one cavity to an exterior of the ferrule, the passage allowing ~~the passage of light to pass~~ from outside the ferrule through the cavity to ~~an~~ the interior of the ferrule;

inserting the end of the cable into the ferrule interior such that there is a snug fit between the ferrule and an outer covering surrounding the fiber; and

using a laser directed through the ~~at least one cavity~~ passage to heat the covering until it ~~flows~~ melts and expands into the at least one cavity and bonds with the ferrule.

19 (currently amended): The method of claim 18 wherein the ferrule is formed with multiple cavities and passages.

20 (currently amended): The method of claim 19 wherein a laser is directed through each passage to each cavity to secure the ferrule to the cable end at multiple locations.